



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area  
**System 72 - Essential Power Generation**  
 Machine Id  
**Z-7201A Essential Power Diesel Engine Lube Oil**  
 Component  
**Diesel Engine**  
 Fluid  
**IRVING IDO UNIVERSAL SAE 15W40 (830 LTR)**

**RECOMMENDATION**

We recommend that you change the oil at the next available stoppage or outage. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PP	PP	PP
Sample Date		Client Info		29 Mar 2024	06 Oct 2023	31 Aug 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	5	4	4
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	2	2
Lead	ppm	ASTM D5185(m)	>40	<1	<1	1
Copper	ppm	ASTM D5185(m)	>330	7	7	6
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

**CONTAMINATION**

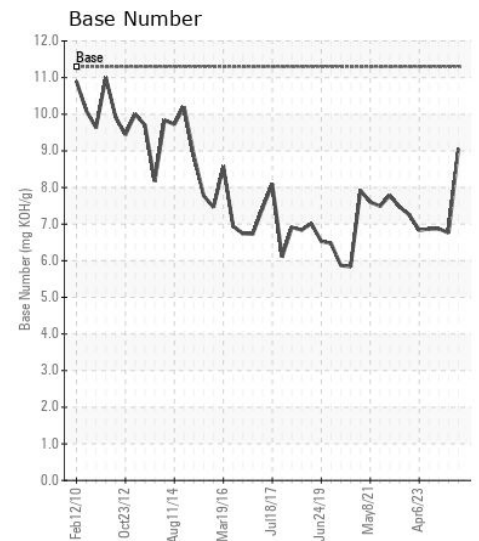
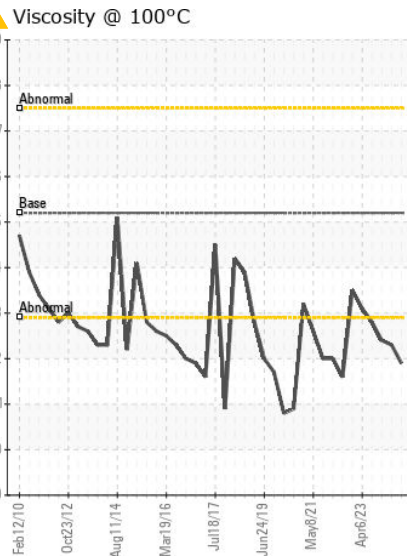
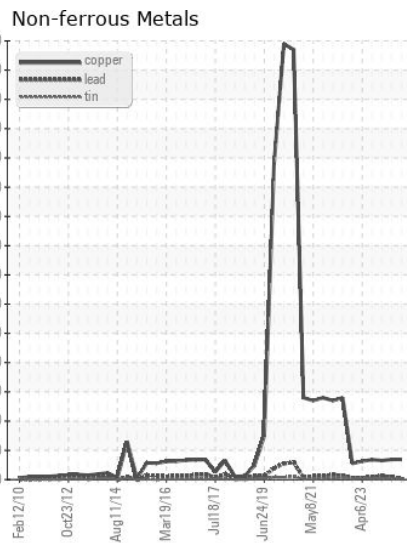
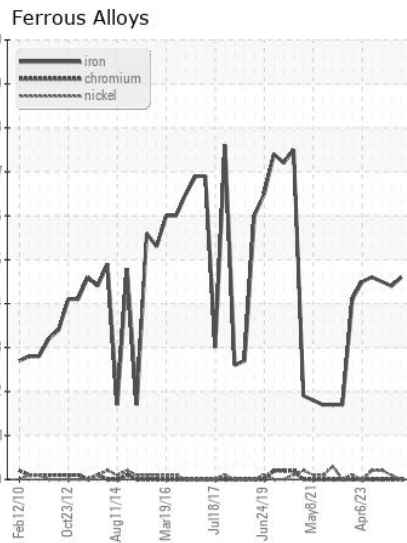
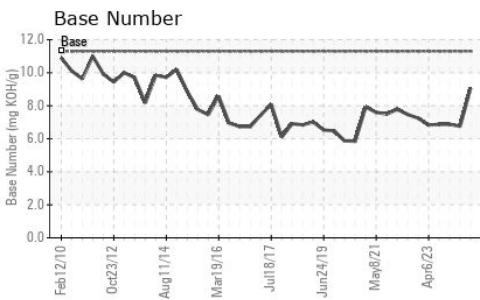
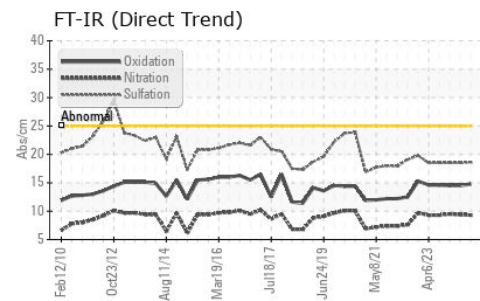
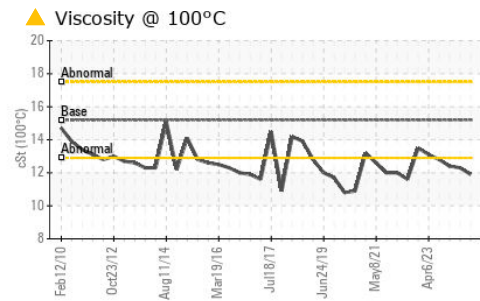
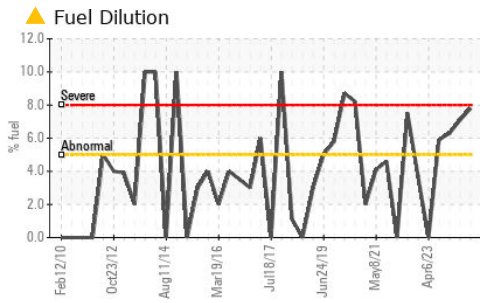
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<1	1	2
Potassium	ppm	ASTM D5185(m)	>20	1	<1	<1
Fuel	%	ASTM D7593*	>5	▲ 7.8	▲ 7.1	▲ 6.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.1	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	9.3	9.4	9.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.6	18.5	18.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		1	1	1
Boron	ppm	ASTM D5185(m)		49	52	50
Barium	ppm	ASTM D5185(m)		0	<1	0
Molybdenum	ppm	ASTM D5185(m)		<1	2	2
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		16	15	15
Calcium	ppm	ASTM D5185(m)		2047	2078	2061
Phosphorus	ppm	ASTM D5185(m)		913	957	993
Zinc	ppm	ASTM D5185(m)	1300	1089	1115	1096
Sulfur	ppm	ASTM D5185(m)		2984	3065	3048
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.8	14.5	14.5
Base Number (BN)	mg KOH/g	ASTM D2896*	11.3	9.06	6.76	6.87
Visc @ 100°C	cSt	ASTM D7279(m)	15.2	▲ 11.9	▲ 12.3	▲ 12.4



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PP  
**Lab Number** : 02627778  
**Unique Number** : 5760910  
**Test Package** : MAR 2 ( Additional Tests: PercentFuel )

**HIBERNIA MGMT & DEVELOPMENT CO. LTD**  
 SUITE 1000,, 100 NEW GOWER STREET  
 ST.JOHN'S, NL  
 CA A1C 6K3  
 Contact: Christopher Michelau  
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*To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.*

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